

STUDIES ON NORTHWESTERN STAPHYLINIDAE I:
ANTHOBIUM STEPH.

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This is the first of a series of papers in which I hope to make known some of the apparently undescribed species of Staphylinidae represented in my collection mostly from the State of Washington.

ANTHOBIUM (EUSPHALERUM) CALIFORNICUM FAUVEL

Anthobium (Eusphalerum) californicum Fauvel, Bull. Soc. Linn. Normand (3) II, 1878, p. 198, 199.

Blewett, Cle Elum, Swauk Creek (Kittitas County). Also a specimen from Golden, Oregon.

ANTHOBIUM (EUSPHALERUM) ORIENTALE BERNHAUER

Anthobium (Eusphalerum) orientale Bernhauer, Pomona Coll. Jour. Ent. IV, 1912, p. 678.

I identify with this species originally described from New Hampshire and Massachusetts an extensive series from Western Washington. I suspect it is the species identified as *horni* Fauv. by Blatchley, Col. Ind. 1910, p. 481, being distinguished from the true *horni* by its finely punctate pronotum.

***Anthobium (Eusphalerum) farrarae* Hatch, new species¹**

Color testaceous, except for the eyes and the four basal segments of the abdomen in the male which are black; head, pronotum, and elytra coarsely, evidently, relatively densely punctate, the punctures separated by about their own diameter or less, those on the pronotum somewhat the densest and most clear cut; head and pronotum alutaceous; pronotum about two-thirds as long as wide, the apex about three-fourths as long as the base, the front angles broadly, the hind angles more narrowly rounded, the sides explanate, more strongly so behind, the side margins arcuate or just appreciably oblique before the hind angles, the median line

¹I propose to name some of the new species in this series of papers after members of the Scarabs Society, an informal semi-social organization composed of some of my former students and others interested in beetles. Since its founding in June, 1937, meetings have been held at the rate of ten or eleven per year. The members are: Elizabeth Farrar Kinney, Barbara Gray Bruhns, Daniel E. Bonnell, Gertrude Minsk, Robert Y. Pratt, Joseph Bruzas, Jr., Clifford J. Burner, Frank M. Beer, Frances Bjorkman, Helen Gellerman Houk, Ervin F. Dailey, Gordon K. Patterson, Robert W. Rogers, Mary Porter Freeman, Warren Ewing, Kenneth M. Fender, Harriet Exline Frizzell.

not grooved; elytra about $2\frac{1}{3}$ times as long as the pronotum, covering the three or four basal abdominal segments, the apices in the male arcuo-truncate with the sutural angles narrowly and rectangularly rounded, in the female feebly obliquely truncate with the sutural angles more broadly rounded; the fifth and sixth ventral segments of the abdomen not sexually modified; hind tarsi with the first two segments longer than the third and fourth, the first four longer than the fifth; length 2.7-2.9 mm.

Type and two *paratype* males: FALL CITY, WASH. May 29, 1932, M. H. Hatch. Three additional *paratype* males from SEATTLE and BOTHELL, WASH. *Allotype* and one *paratype* females: INDEX, WASH. May 25, 1930, M. H. Hatch. Three additional *paratype* females from SEATTLE and "STILLAGUAMISH," near DARRINGTON, WASH.

From allied species, *farrarae* is distinguished by its testaceous color, the first four abdominal segments of the male black, its densely punctate, alutaceous, ungrooved pronotum with arcuate sides, its unmodified sixth male abdominal segment, and its feebly dimorphic elytral apices. It is somewhat related to *pothos* Mann., which is the commonest species in western Washington, in which the pronotum is less densely punctate and grooved along the meridian line, the male with the first four and one half abdominal segments black, the fifth emarginate along its posterior margin, and the elytral apices scarcely at all sexually dimorphic.

Anthobium (*Eusphalerum*) *grayae* Hatch, new species

Color testaceous, the median portions of the head and pronotum and the outer portions of the antennae dusky, the meso- and metathorax and abdomen piceous black, the latter slightly paler at the extreme apex in the male; head and pronotum punctate and alutaceous, the latter densely and strongly so, the elytral punctures larger and dense but not so clear cut; pronotum about three-fourths as long as wide, the apex about four-fifths as wide as the base, the front angles broadly rounded, the side margins broadly rounded in front, oblique or subsinuate in front of the narrowly rounded hind angles, the side feebly explanate toward the hind angles, the middle line more or less evidently grooved; elytra about two and one-half times as long as the pronotum, covering four or more abdominal segments; the elytral apices in the male arcuately truncate, the outer angles broadly, the inner angles less broadly arcuate, in the female obliquely truncate, the sutural angles slightly divergent and narrowly arcuate, the apical margin just laterad to the sutural angles feebly sinuate; male with the sixth ventral abdominal segment emarginate along the posterior margin, the seventh ventral consisting of a broad median lobe and

a narrower longer lateral lobe on either side; hind tarsi with the first four segments subequally short, together shorter than the fifth; length 2.1-2.25 mm.

Type male, *allotype* female, and 48 *paratypes*; SEATTLE, WASH., IV-30-1930, M. H. Hatch. 30 additional *paratypes*: SEATTLE, DUVAL, EVANS CR. (King Co.), LONGMIRE (Mt. Rainier); NORTH BEND (Maloney's Grove), all in western WASHINGTON. One *paratype*: OTIS, OREGON.

This species is distinguished from other American species of the subgenus *Eusphalerum* by the slightly sinuate apices of the female elytra. From *farrarae* and *pothos* it is furthermore distinguished by its dusky head and pronotum and black female abdomen.

Anthobium (*Anthobium*) *bonnelli* Hatch, new species

Piceous black, the elytra and appendages testaceous; head and pronotum finely distinctly punctate, the pronotum more evidently alutaceous than the head, the elytra more coarsely but less distinctly punctate than the head and pronotum; pronotum about seven-tenths as long as wide, the apex seven-tenths as wide as base, the sides evenly arcuate, the fore and hind angles broadly rounded, the side margin feebly explanate in front of the hind angles; elytra (male) two and one-half or more times as long as the pronotum, covering the three or four basal abdominal segments, the apices broadly arcuate into the more narrowly arcuate sutural angles; elytra (female) more than three times as long as the pronotum, longer than the abdomen, the apices broadly curving into the acutely produced slightly divergent sutural angles, the apical margin just laterad to the sutural angle strongly sinuate; male with fifth abdominal segment unmodified, the sixth abruptly and semi-circularly thickened at the middle, the semi-circular area being separated from the posterior edge by a narrow membranous margin; hind tarsi with the first four segments subequally short, together shorter than the fifth; length 1.8-2.25 mm.

Type male, *allotype* female, and two *paratypes*; SULTAN, WASH. April 14, 1931 M. H. Hatch. Two additional *paratypes* same locality: May 10, 1933, May 13, 1931.

By its dimorphic elytra and the structure of the sixth abdominal segment in the male, this species is related to *tibiale* Csy. from Arizona, from which it differs by its more strongly arcuate pronotal side margins (subparallel, very feebly arcuate in *tibiale*) and longer male elytra (about twice as long as the pronotum in *tibiale*, exposing four abdominal segments, as opposed to only two or three in *bonnelli*).

Anthobium (Anthobium) minskae Hatch, new species

Testaceous, the male with the first four segments of the abdomen black; head and pronotum alutaceous, moderately finely punctate, the pronotum more conspicuously so, elytra with coarser but less clear-cut punctures; pronotum about five-eighths as long as wide, the apex about two-thirds as wide as the base, the median line not grooved, the front angles broadly rounded, the side margins arcuate in front, behind oblique or broadly subsinuate before the more or less obtuse hind angles, the side margins somewhat explanate, more broadly so behind, elytra three (male) or four (female) times as long as the pronotum, the apices (male) broadly rounded into the narrowly rectangularly rounded sutural angles, exposing the apex of the abdomen, or (female) obliquely produced into the narrowly acutely rounded sutural angles, extending beyond the abdomen; male with the posterior margin of the fifth ventral abdominal broadly triangularly incised, the apex of the incision extending as a parallel-sided fissure about four times as long as deep, the length of the fissure being slightly greater than the depth of the triangular incision, the sixth ventral segment broadly triangularly incised along its posterior margin, the median lobe of the seventh segment triangular; male protibiae straight; last tarsal segment shorter than the four basal segments taken together, that of the hind tarsus being about three-fifths as long, the first and second segments elongate; length 2.2-2.7 mm.

Type male, *allotype* and one *paratype* female: OLYMPIC HOT SPRINGS, WASH. May 31, 1931, M. H. Hatch. Ten additional *paratypes*; COOKS, LAKE CRESCENT, LEWIS AND CLARK STATE PARK, SEATTLE, and SWAUK CREEK (Kititas Co.), all in WASHINGTON.

Related to *fraternum* Casey from northern California by the fissure of the posterior margin of the fifth ventral abdominal segment in the male, but distinguished therefrom by the black color of the four basal segments of the male abdomen, which is pale in *fraternum*. Casey makes no mention of the fissure in his species being itself at the apex of a triangular incision, as in *minskae*.

In *farrarae* and *minskae* described above and in such previously described species as *convexum* Fauv. and *fraternum* and *punctatum* of Casey the structure of the tarsi is such as to raise the propriety of retaining them in *Anthobium*. In these species the first two segments of the tarsus are longer than the next two, the first four together longer than the fifth. I leave the problem to future students of the group.